

REMARKS

This Response is in reply to the Final Office Action mailed on March 21, 2008. Claims 1-12, 14, 15, 17-28, 30, and 32-39 are pending in the present application. Claims 10-12, 14, 15, 17, 18, 25-28, 30, and 32-32-39 were rejected. Claims 1-9 and 19-24, previously withdrawn in response to a restriction requirement, have been canceled, as have claims 36 and 37.

Interview Summary

Applicants express their appreciation to the Examiner for the telephone interview conducted with Applicants' attorney, David Hendricks, on April 2, 2008. During the interview, technical differences between vacuum plasma and plasma generated at about atmospheric pressure were discussed. Mr. Hendricks also presented possible responses to the rejections of record.

§112 Rejections

Claims 36 and 37 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement because the claims contained subject matter not described in the specification. Claims 36 and 37 have been canceled, rendering this rejection moot.

§103 Rejections

Claims 10-12, 14, 15, 17, 18, 25-28, 30, 32-35, 38, and 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,822,632 (hereinafter Williams) in view of U.S. Patent No. 5,830,577 (hereinafter Murayama). This rejection essentially repeats a similar rejection from the Office Action mailed on October 2, 2007. In their response to that Office Action, Applicants argued that the combination of Williams and Murayama did not teach all the claim limitations, nor were the claim limitations obvious based on their teachings. Applicants continue to maintain the arguments presented in the Response to the October 2, 2007, Office Action.

Applicants also presented a §1.132 Declaration in the Response to the October 2, 2007, Office Action that demonstrated the results of combining Williams and Murayama. The Examiner found the declaration to be insufficient because 1) several of the examples did not provide time or power under which the plasma was applied, and 2) the examples presented in the declaration were not commensurate in scope to the claims. In response, the Applicants have submitted an expanded declaration (the Sakhrani declaration) concurrently with this

response. In the Sakhrani declaration, the examples presented now include details of the process parameters. Further, additional examples have been included so that the examples are commensurate in scope to the claims.

As detailed in the Sakhrani declaration, poor lubricity results were obtained when using either a perfluoropolyether lubricant of the present invention or a perfluoropolyether lubricant with binding sites as disclosed by Murayama with the vacuum plasma method disclosed by Williams. None of the experiments carried out using vacuum plasma, regardless of the specific lubricant used, were able to obtain lubricity results comparable with the lubricity obtained by the present application. ***Only when a lubricant was treated with an ionizing gas plasma at about atmospheric pressure were high levels of lubricity obtained.*** These surprising and unexpected results clearly demonstrate that one skilled in the art would not combine Williams and Murayama. Thus, any rejections based on the combination are improper and must fail.

In the response to the October 2, 2007, Office Action, Applicants also presented arguments against the Examiner's contention that the phrase "any pressure" as used in Williams encompassed plasma generated under conditions of extreme vacuum as used in Williams, as well as plasma generated at about atmospheric pressure as taught by the present application. In support of Applicants' view that atmospheric pressure plasma and vacuum plasma are two entirely different technologies, Applicants submit a second declaration (the Cuomo declaration) concurrently with this response.

The Cuomo declaration is given by an expert in both vacuum and atmospheric pressure plasma technologies. According to the Examiner's interpretation of Williams, atmospheric plasma differs from vacuum plasma by a mere adjustment of pressure. The Cuomo declaration presents clear and convincing evidence that the two technologies are entirely different processes. Because of the fundamental differences in the two technologies, one skilled in the art would recognize that Williams taught only vacuum plasma technology. Thus, the use of the terminology "any pressure" in Williams can only refer to the range of pressure used for vacuum plasma technology and cannot extend to atmospheric pressure plasma technology.

For at least these reasons, the combination of Williams and Murayama is improper, and any rejections based on the combination must be withdrawn.

New Claims

New independent claim 40 has been added. This claim includes an article comprising one or more surfaces, at least one of the surfaces exposed to a first ionizing gas plasma at about atmospheric pressure and a lubricant applied to the plasma-treated surface to form a

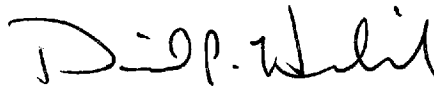
coated surface, wherein the coated surface is subsequently exposed to a second ionizing gas plasma at about atmospheric pressure. Claim 40 is commensurate in scope with independent claim 10 (article including a lubricant-coated surface exposed to an energy source at about atmospheric pressure) and independent claim 25 (article including a surface exposed to ionizing gas plasma at about atmospheric pressure and a lubricant applied to the plasma-treated surface). Thus, the scope of claim 40, by including the scope of both claim 10 and 25, is more limited in scope than either individual claim 10 or claim 25, and is patentable for at least the reasons stated above for claims 10 and 25. New claim 41 depending from claim 40 simply specifies that the first and second ionizing gas plasmas may be essentially the same. No new matter is added by these claims, and support may be found throughout the specification.

New claim 42 further defines the ionizing radiation of claim 10 as gamma radiation. Support for this amendment may be found at least in ¶0050 of the specification. Since the originally submitted claims included that the energy source of claim 10 may be ionizing radiation and the specification clearly specified that the ionizing radiation may be gamma radiation, this limitation should have been included in previous searches performed by the Examiner. Thus, new claim 42 presents no new material, nor does it present material that would warrant a further search by the Examiner.

All objections and rejections having been addressed, it is respectfully submitted that the present application, as amended, is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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